

=> d his

(FILE 'USPAT' ENTERED AT 14:13:51 ON 22 AUG 1998)

FILE 'USPAT, USOCR, EPO, JPO' ENTERED AT 14:16:05 ON 22 AUG 1998  
FILE 'USPAT'

L1 15 S NONDIGESTIBLE (2A) COMPOSITION#  
FILE 'USOCR'  
L2 0 S NONDIGESTIBLE (2A) COMPOSITION#  
FILE 'EPO'  
L3 7 S NONDIGESTIBLE (2A) COMPOSITION#  
FILE 'JPO'  
L4 0 S NONDIGESTIBLE (2A) COMPOSITION#  
TOTAL FOR ALL FILES  
L5 22 S NONDIGESTIBLE (2A) COMPOSITION#  
FILE 'USPAT'  
L6 1 S L5 (P) SHEARING  
FILE 'USOCR'  
L7 0 S L5 (P) SHEARING  
FILE 'EPO'  
L8 0 S L5 (P) SHEARING  
FILE 'JPO'  
L9 0 S L5 (P) SHEARING  
TOTAL FOR ALL FILES  
L10 1 S L5 (P) SHEARING  
FILE 'USPAT'  
L11 1 S L5 AND SHEARING  
FILE 'USOCR'  
L12 0 S L5 AND SHEARING  
FILE 'EPO'  
L13 0 S L5 AND SHEARING  
FILE 'JPO'  
L14 0 S L5 AND SHEARING  
TOTAL FOR ALL FILES  
L15 1 S L5 AND SHEARING

=> s l15 and (shear or sheared)

FILE 'USPAT'  
76370 SHEAR  
14376 SHEARED  
L16 1 L11 AND (SHEAR OR SHEARED)

FILE 'USOCR'  
4245 SHEAR  
811 SHEARED  
L17 0 L12 AND (SHEAR OR SHEARED)

FILE 'EPO'  
8451 SHEAR  
1058 SHEARED  
L18 0 L13 AND (SHEAR OR SHEARED)

FILE 'JPO'  
6279 SHEAR  
1195 SHEARED  
L19 0 L14 AND (SHEAR OR SHEARED)

TOTAL FOR ALL FILES  
L20 1 L15 AND HEAR OR SHEARED)

=> d 120 1 hit

US PAT NO: 5,422,131 [IMAGE AVAILABLE] L20: 1 of 1  
TITLE: **Nondigestible** fat **compositions** containing  
relatively small nondigestible solid particles for  
passive oil loss control

> d his

(FILE 'HOME' ENTERED AT 14:31:39 ON 22 AUG 1998)

FILE 'CAPLUS, WPIDS' ENTERED AT 14:32:10 ON 22 AUG 1998

L1 11 S NONDIGESTIBLE (2A) COMPOSITION#  
L2 0 S L1 AND (SHEAR OR SHEARED OR SHEARING)

=> d 11 1-11 ibib ab

L1 ANSWER 1 OF 11 CAPLUS COPYRIGHT 1998 ACS  
ACCESSION NUMBER: 1996:483878 CAPLUS  
DOCUMENT NUMBER: 125:141175  
TITLE: **Nondigestible fat compositions**  
containing solid polyol polyester polymer for  
passive oil loss control  
INVENTOR(S): Corrigan, Patrick J.; Howie, John K.  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S., 18 pp. Cont.-in-part of U.S. Ser. No.  
968,791, abandoned.  
CODEN: USXXAM

	NUMBER	DATE
	-----	-----
PATENT INFORMATION:	US 5534284 A	960709
APPLICATION INFORMATION:	US 94-301947	940907
PRIORITY APPLN. INFO.:	US 92-968791	921030
DOCUMENT TYPE:	Patent	
LANGUAGE:	English	

AB Nondigestible fat compns. useful as replacements for triglyceride fats or oils in foods are disclosed. These compns. have relatively flat solid fat content (SFC) profile slopes between typical room temp. and body temp. The nondigestible fat compns. comprise a liq. nondigestible oil and nondigestible solid polyol polyester particles dispersed in the oil in an amt. sufficient to control passive oil loss. The solid polyol polyester particles of the compn. herein comprise from about 10% to 50% polyol polyester polymer and from 50% to about 90% polyol polyester monomer. The polyol polyester material which forms these solid particles must contain a relatively high proportion of long chain satd. fatty acid ester groups. Edible fat-contg. products comprising these nondigestible fats can be less waxy tasting due to the lower level of solids required for passive oil loss control.

L1 ANSWER 2 OF 11 CAPLUS COPYRIGHT 1998 ACS  
ACCESSION NUMBER: 1995:964874 CAPLUS  
DOCUMENT NUMBER: 124:28687  
TITLE: **Nondigestible fat compositions**  
containing cocrystallized blend of polyol  
polyester hardstock and crystal modifier as a  
passive oil loss control agent.  
INVENTOR(S): Johnston, Robert W.; Lin, Peter Y. T.; Mead,  
Michael L.  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S., 31 pp. Cont.-in-part of U.S. Ser. No.  
969,607, abandoned.  
CODEN: USXXAM

	NUMBER	DATE
	-----	-----
PATENT INFORMATION:	US 5451416 A	950919
APPLICATION INFORMATION:	US 94-287976	940810
PRIORITY APPLN. INFO.:	US 92-969607	921030
DOCUMENT TYPE:	Patent	
LANGUAGE:	English	
AB	<p>Nondigestible fat compns. having relatively flat solid fat content (SFC) profile slopes between typical room and body temps. are disclosed. These nondigestible fat comprise a liq. nondigestible oil and relatively small nondigestible particles dispersed in the oil to control passive oil loss. The nondigestible particles consist of a cocrystd. blend of a nondigestible solid polyol fatty acid polyester hardstock and a crystal modifier (prepn. given) capable of inducing the hardstock to form these relatively small particles. Crystal modifiers are, i.a., sucrose tetrabeheenate tetracaprylate, sucrose pentabeheenate trilaurate, sucrose hexabeheenate dicaprylate, and sucrose hexabeheenate dilaurate. Edible fat-contg. products comprising these nondigestible fat can be less waxy tasting due to the lower level of solids required for passive oil loss control.</p>	

L1 ANSWER 3 OF 11 CAPLUS COPYRIGHT 1998 ACS

ACCESSION NUMBER: 1994:532720 CAPLUS

DOCUMENT NUMBER: 121:132720

TITLE: **Nondigestible fat compositions**  
 containing cocrystallized blend of polyol polyester hardstock and crystal modifier as a passive oil loss control agent.

INVENTOR(S): Johnston, Robert William; Lin, Peter Yau Tak; Mead, Michael Lawrence

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: PCT Int. Appl., 74 pp.

CODEN: PIXXD2

	NUMBER	DATE
	-----	-----
PATENT INFORMATION:	WO 9409640 A1	940511
DESIGNATED STATES:	W: AU, CA, FI, JP, KR, NO, NZ	
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE	
APPLICATION INFORMATION:	WO 93-US10112	931021
PRIORITY APPLN. INFO.:	US 92-969607	921030
DOCUMENT TYPE:	Patent	
LANGUAGE:	English	
AB	<p>Nondigestible fat compns. having relatively flat Solid Fat Content profile slopes between room and body temps., are disclosed. These nondigestible fat compns. comprise a liq. nondigestible oil and relatively small nondigestible particles dispersed in the oil to control passive oil loss. These nondigestible particles consist of a cocrystd. blend of a nondigestible solid polyol fatty acid polyester hardstock and a crystal modifier capable of inducing this hardstock to form these relatively small particles. Edible fat-contg. products comprising these nondigestible fat compns. can be less waxy testing due to the lower level of solids required for passive oil loss control. Liq. nondigestible oil and hardstock was prepd. by completely esterifying sucrose with cottonseed oil and soybean oil fatty acids, resp. A nondigestible fat compn. comprised the above liq. oil and hardstock, combined with a crystal modifier consisting of diversely-esterified sucrose polyester (sunflower/C22), prepd. by a modification of the U.S. patents 4,518,722 and 4,517,360.</p>	

L1 ANSWER 4 OF 11 CAPLUS COPYRIGHT 1998 ACS

ACCESSION NUMBER:  
DOCUMENT NUMBER:  
TITLE:

1994:507066 CAPLUS  
121:107066

**Nondigestible fat compositions**

containing diversely esterified polyol  
polyesters for passive oil loss control  
Corrigan, Patrick Joseph; Howie, John Keeney;  
Lin, Peter Yau Tak  
Procter and Gamble Co., USA  
PCT Int. Appl., 39 pp.  
CODEN: PIXXD2

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

	NUMBER	DATE
	-----	-----
PATENT INFORMATION:	WO 9409639 A1	940511
DESIGNATED STATES:	W: AU, CA, FI, JP, KR, NO, NZ RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE	
APPLICATION INFORMATION:	WO 93-US10111	931021
PRIORITY APPLN. INFO.:	US 92-968780	921030
DOCUMENT TYPE:	Patent	
LANGUAGE:	English	

AB Nondigestible fat compns. useful as a replacement for triglyceride fats or oils in foods are disclosed. These compns. have relatively flat Solid Fat Content (SFC) profile slopes between typical room and body temps. The nondigestible fat compns. comprise a liq. nondigestible oil and nondigestible particles of solid polyol polyester material dispersed in the oil in an amt. sufficient to control passive oil loss. The ester groups of the solid polyol polyester material comprise: (i) at least about 15% ester groups formed from C20-C26 long chain satd. fatty acid radicals, and (ii) ester groups formed from fatty or other org. acid radicals which are dissimilar said long chain satd. fatty acid radicals. The molar ratio of said dissimilar acid radicals to said long chain satd. fatty acid radicals ranges from about 0.1:7.9 to about 3:5. Moreover, the dissimilar acid radicals cannot consist solely of C2-C12 short chain satd. fatty acid radicals, C20 or higher long chain unsatd. fatty acid radicals, or a combination of said short chain satd. and said long chain unsatd. fatty acid radicals. Edible fat-contg. products (e.g. potato chips) contg. these nondigestible fat compns. can be less waxy tasting due to the lower level of solids required for passive oil loss control.

L1 ANSWER 5 OF 11 CAPLUS COPYRIGHT 1998 ACS

ACCESSION NUMBER: 1994:481510 CAPLUS

DOCUMENT NUMBER: 121:81510

TITLE: **Nondigestible fat compositions**

containing relatively small nondigestible solid particles for passive oil loss control.

INVENTOR(S):

Elsen, Joseph James; Kester, Jeffrey John; Lin, Peter Yau Tak; Wehmeier, Thomas Joseph

PATENT ASSIGNEE(S):

Procter and Gamble Co., USA

SOURCE:

PCT Int. Appl., 92 pp.

CODEN: PIXXD2

	NUMBER	DATE
	-----	-----
PATENT INFORMATION:	WO 9409641 A1	940511
DESIGNATED STATES:	W: AU, CA, FI, JP, KR, NO, NZ RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE	
APPLICATION INFORMATION:	WO 93-US10113	931021
PRIORITY APPLN. INFO.:	US 92-969670	921030
DOCUMENT TYPE:	Patent	
LANGUAGE:	English	

AB Nondigestible fats having relatively flat Solid Fat Content profile

slopes between room and body temp., are disclosed. These nondigestible fats comprise a liq. nondigestible and relatively small nondigestible particles dispersed in the oil to control passive oil loss. Edible fat-contg. products comprising these nondigestible fats can be less waxy tasting due to the lower level of solids required for passive oil loss control. Sucrose was reacted with Me esters of castor oil and hydrogenated rapeseed oil fatty acids, to give a solid sucrose polyester. A nondigestible fat substitute comprised 4 g of the above solid sucrose polyester and 96 g liq. sucrose polyester, prepd. by totally esterifying sucrose with cottonseed oil fatty acids.

L1 ANSWER 6 OF 11 CAPLUS COPYRIGHT 1998 ACS

ACCESSION NUMBER: 1994:481509 CAPLUS

DOCUMENT NUMBER: 121:81509

TITLE: **Nondigestible fat compositions**  
containing solid polyglycerol ester particles  
for passive oil loss control.

INVENTOR(S): Howie, John Keeney

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: PCT Int. Appl., 44 pp.

CODEN: PIXXD2

	NUMBER	DATE
	-----	-----
PATENT INFORMATION:	WO 9409638 A1	940511
DESIGNATED STATES:	W: AU, CA, FI, JP, KR, NO, NZ	
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,	
	LU, MC, NL, PT, SE	
APPLICATION INFORMATION:	WO 93-US10110	931021
PRIORITY APPLN. INFO.:	US 92-968775	921030
DOCUMENT TYPE:	Patent	
LANGUAGE:	English	

AB Nondigestible fat compns., useful as a replacement for triglyceride fats or oils in foods, are disclosed. The compns. have relatively flat Solid Fat Content (SFC) profile slopes between room and body temps. The nondigestible fat compns. comprise a liq. nondigestible oil, and nondigestible solid polyglycerol ester particles dispersed in the oil, in an amt. sufficient to control passive oil loss. The ester groups of the solid polyglycerol ester particles comprise long-chain (C16-24) fatty acid radicals, with .gtoreq.40% of the long-chain fatty acid radicals being satd. and having at least 18 C atoms. Edible fat products contg. these nondigestible fat compns. can be less waxy tasting due to the lower level of solids required for passive oil loss control. Polyglycerol (av. d.p. 4.76) was esterified with a mixt. of palmitoyl chloride and stearoyl chloride, in DMF-pyridine. A fat substitute comprised 4 g of the above polyglycerol ester, dispersed in 96 g sucrose totally esterified with cottonseed oil fatty acids.

L1 ANSWER 7 OF 11 CAPLUS COPYRIGHT 1998 ACS

ACCESSION NUMBER: 1994:481508 CAPLUS

DOCUMENT NUMBER: 121:81508

TITLE: **Nondigestible fat compositions**  
containing solid polyol polyester polymer for  
passive oil loss control.

INVENTOR(S): Corrigan, Patrick Joseph; Howie, John Keeney

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: PCT Int. Appl., 49 pp.

CODEN: PIXXD2

	NUMBER	DATE
	-----	-----
PATENT INFORMATION:	WO 9409637 A1	940511
DESIGNATED STATES:	W: AU, CA, FI, JP, KR, NO, NZ	

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,  
 LU, MC, NL, PT, SE  
 APPLICATION INFORMATION: WO 93-US10108 931021  
 PRIORITY APPLN. INFO.: US 92-968791 921030  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English

AB Nondigestible fat compns., useful as replacements for triglyceride fats or oils in foods, are disclosed. These compns. have relatively flat Solid Fat Content (SFC) profile slopes between room temp. and body temp. The nondigestible fat compns. comprise a liq. nondigestible oil, and nondigestible solid polyol polyester particles dispersed in the oil in an amt. sufficient to control passive oil loss. The solid polyol polyester particles of the compn. comprise .apprx.1-100% polyol polyester polymer and from 0 to .apprx.99% polyol polyester monomer. The polyol polyester material which forms these solid particles must contain a relatively high proportion of long-chain satd. fatty acid ester groups. Edible fat-contg. products comprising these nondigestible fats can be less waxy tasting, due to the lower level of solids required for passive oil loss control. A solid sucrose polyester, comprising monomer and oligomers, was prepd. by reacting sucrose with Me esters of both behenic acid and dimerized distd. tallow fatty acids. This solid polyester (4 g) was dispersed in 96 g liq. sucrose polyester, in which sucrose was totally esterified with cottonseed oil fatty acids. Cthe resulting nondigestible fat compn. had a SFC profile slope of -0.1.

L1 ANSWER 8 OF 11 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 94-166989 [20] WPIDS  
 DOC. NO. CPI: C94-076476  
 TITLE: Nondigestible fat compsns., comprising small nondigestible particles - of polyol polyester dispersed in a liq. nondigestible oil, provide passive oil loss control without being excessively waxy tasting..  
 DERWENT CLASS: D13 E13  
 INVENTOR(S): ELSSEN, J J; KESTER, J J; LIN, P Y T; WEHMEIER, T J  
 PATENT ASSIGNEE(S): (PROC) PROCTER & GAMBLE CO  
 COUNTRY COUNT: 27  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9409641	A1	940511	(9420)*		93
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU CA FI JP KR NO NZ					
AU 9454472	A	940524	(9434)		
US 5422131	A	950606	(9528)		43
FI 9502048	A	950428	(9529)		
CN 1087787	A	940615	(9531)		
EP 666711	A1	950816	(9537)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
NO 9501605	A	950630	(9538)		
JP 08502658	W	960326	(9644)		96
EP 666711	B1	970423	(9721)	EN	50
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
NZ 257733	A	970424	(9723)		
DE 69310196	E	970528	(9727)		
ES 2100579	T3	970616	(9731)		
AU 682477	B	971009	(9749)		
TW 327127	A	980221	(9830)		

# APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
-----------	------	-------------	------

WO 9409641	A1	WO 93-US10113	931021
AU 9454472	A	WO 93-US10113	931021
		AU 94-54472	931021
US 5422131	A	US 92-969670	921030
FI 9502048	A	WO 93-US10113	931021
		FI 95-2048	950428
CN 1087787	A	CN 93-120713	931030
EP 666711	A1	EP 93-924989	931021
		WO 93-US10113	931021
NO 9501605	A	WO 93-US10113	931021
		NO 95-1605	950427
JP 08502658	W	WO 93-US10113	931021
		JP 94-511182	931021
EP 666711	B1	EP 93-924989	931021
		WO 93-US10113	931021
NZ 257733	A	NZ 93-257733	931021
		WO 93-US10113	931021
DE 69310196	E	DE 93-610196	931021
		EP 93-924989	931021
		WO 93-US10113	931021
ES 2100579	T3	EP 93-924989	931021
AU 682477	B	AU 94-54472	931021
TW 327127	A	TW 93-109771	931120

# FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9454472	A	Based on	WO 9409641
EP 666711	A1	Based on	WO 9409641
JP 08502658	W	Based on	WO 9409641
EP 666711	B1	Based on	WO 9409641
NZ 257733	A	Based on	WO 9409641
DE 69310196	E	Based on	EP 666711
		Based on	WO 9409641
ES 2100579	T3	Based on	EP 666711
AU 682477	B	Previous Publ.	AU 9454472
		Based on	WO 9409641

PRIORITY APPLN. INFO: US 92-969670 921030

AB WO 9409641 A UPAB: 940705

A nondigestible fat compsn., useful as a replacement for triglyceride fats or oils in foods, has a solid fat content profile slope between 21.1 deg.C and 37 deg.C of 0 to minus 1.26% solids/deg.C.

The compsn. comprises: A) a liq. nondigestible oil having a complete m.pt. below 37 deg.C; and B) nondigestible particles, having a complete m.pt. of 37-500 deg.C, dispersed in the oil in an amt sufficient to control passive oil loss upon the ingestion of the compsn.; the particles not consisting solely of polyol polyesters where the polyol moiety has at least 4 hydroxyl gps., at least 4 of the hydroxyl gps. being esterified, and where the ester gps. comprise a combination of: (1) 12C or higher unsaturated fatty acid radicals, 2-12C satd. fatty acid radicals of mixts. of these; and (2) 20C or higher satd. fatty acid radicals; where the molar ratio of (1):(2) radicals is 1:15-2:1 and at least 15 wt.% of the fatty acid radicals forming the combination are 20C and higher satd. fatty acid radicals.

The nondigestible particles are characterised by at least one of the following: (a) having a thickness of 1 micron or less, pref. 0.1 micron or less; (b) imparting to the compsn. an Oil Sepn. Valve of 16g or less; and (c) imparting to the compsn. a Thixotropic Area Valve of 10 kPa/sec. or less. USE/ADVANTAGE - Edible fat-contg. prods. comprising the non-digestible fat compsns. are less waxy



tasting, due to the lower level of slids required for passive oil  
loss control.  
Dwg.0/10

L1 ANSWER 9 OF 11 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD  
ACCESSION NUMBER: 94-166988 [20] WPIDS  
CROSS REFERENCE: 95-336222 [43]  
DOC. NO. CPI: C94-076475  
TITLE: Nondigestible fat compsns. used as a passive oil  
loss control agent - contain cocrystallised blend  
of poly ol polyester hardstock and crystal modifier  
resulting in less waxy tasting edible fat-contg.  
prods..  
DERWENT CLASS: D13 E13  
INVENTOR(S): JOHNSTON, R W; LIN, P Y T; MEAD, M L; DESAI, N P;  
HEINTZ, R A; SOON-SHIONG, P  
PATENT ASSIGNEE(S): (PROC) PROCTER & GAMBLE CO; (VIVO-N) VIVORX INC  
COUNTRY COUNT: 25  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9409640	A1	940511	(9420)*		75
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU CA FI JP KR NO NZ					
AU 9455382	A	940524	(9434)		
FI 9502047	A	950428	(9529)		
EP 666713	A1	950816	(9537)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
NO 9501604	A	950630	(9538)		
AU 668630	B	960509	(9626)		
EP 666713	B1	960724	(9634)	EN	43
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
DE 69303828	E	960829	(9640)		
JP 08502657	W	960326	(9644)		81
ES 2091115	T3	961016	(9647)		
CN 1089781	A	940727	(9713)		
NZ 257945	A	970324	(9719)		
AU 687728	B	980305	(9820)#		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9409640	A1	WO 93-US10112	931021
AU 9455382	A	WO 93-US10112	931021
		AU 94-55382	931021
FI 9502047	A	WO 93-US10112	931021
		FI 95-2047	950428
EP 666713	A1	WO 93-US10112	931021
		EP 94-900371	931021
NO 9501604	A	WO 93-US10112	931021
		NO 95-1604	950427
AU 668630	B	AU 94-55382	931021
EP 666713	B1	WO 93-US10112	931021
		EP 94-900371	931021
DE 69303828	E	DE 93-603828	931021
		WO 93-US10112	931021
		EP 94-900371	931021
JP 08502657	W	WO 93-US10112	931021
		JP 94-511181	931021
ES 2091115	T3	EP 94-900371	931021
CN 1089781	A	CN 93-120714	931030
NZ 257945	A	NZ 93-257945	931021
		WO 93-US10112	931021

## FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9455382	A	Based on	WO 9409640
EP 666713	A1	Based on	WO 9409640
AU 668630	B	Previous Publ.	AU 9455382
		Based on	WO 9409640
EP 666713	B1	Based on	WO 9409640
DE 69303828	E	Based on	EP 666713
		Based on	WO 9409640
JP 08502657	W	Based on	WO 9409640
ES 2091115	T3	Based on	EP 666713
NZ 257945	A	Based on	WO 9409640
AU 687728	B	Previous Publ.	AU 9334200
		Based on	WO 9415589

PRIORITY APPLN. INFO: US 92-969607 921030; AU 93-34200 921230

AB WO 9409640 A UPAB: 951109

A nondigestible fat compsn. useful as a replacement for triglyceride fats or oils in foods, and characterised by a solid fat content profile slope between 21.1-37 deg.C of 0-1.26% solids/C, comprises: (a) a liq. nondigestible oil having a complete melting pt. below 37 deg.C; and (b) nondigestible solid particles disposed in (a) in an amt. sufficient to control passive oil loss when ingested. The particles have (c) a complete melting pt above 37 deg.C and (d) a thickness of 1 micron or less, pref. 0.1 micron or less. The particles consist of a cocrystallised blend of: (e) a nondigestible solid polyol fatty acid polyester hardstock having a complete melting pt above 37 deg.C and normally tending to form spherulitic particles having a dia of 3 microns or larger when crystallised in (a); and (f) a crystal modifier capable of inducing hardstock to form non-digestible particles having a thickness of 1 micron or less, pref. 0.1 micron or less when cocrystallised with the hardstock in (a).

The ratio of the hardstock to crystal modifier in the cocrystallised blend ranges from 95:5 to 20:80, pref from 95:5 to 25:75.

Also claimed, a process for preparing a nondigestible fat compsn. useful as a replacement for triglyceride fats or oils in foods, which involves forming a melted mixt. which comprises: (a)' part (a) (b)' a cocrystallisable blend consisting of part (e) and part (f).

The melted mixt. is cooled so that the cocrystallisable blend forms nondigestible particles dispersed in the liq. nondigestible oil. The fat compsn. formed has a solid fat content profile slope between 21.1-37 deg.C of from 0-1.26% solids/deg.C. The nondigestible particles have (c) and (d). They are dispersed in the compsn. in an amt. sufficient to control passive oil loss when ingested.

Also claimed, a thickness digestible oil prod. comprising (a)'' a liq. digestible triglyceride oil; and (b)'' from 2-20% of nondigestible solid particles dispersed in digestible triglyceride oil. The particles have (c) and (d). They consist of a cocrystallised blend of (e); and (c)'' a crystal modifier capable of inducing the hardstock to form nondigestible particles having a thickness of 1 micron or less, when cocrystallised with the hardstock on the digestible oil. The ratio of hardstock to crystal modifier in the cocrystallised blend ranges from 95:5 to 20:80.

USE/ADVANTAGE - Useful for replacing trilglyceride fats or oils in foods. Used as thickening agents in shortenings, margarines, mayonnaise, frozen dairy desserts and the like. The relatively small non-digestible particles provide efficient passive oil loss control

without being excessively waxy tasting. The levels of solids required to achieve this, pref. less than 15% of total nondigestible fat, is significantly less than other prior art methods.  
Dwg.0/10

L1 ANSWER 10 OF 11 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 94-166987 [20] WPIDS  
 DOC. NO. CPI: C94-076474  
 TITLE: Non-digestible fat compsns. contg. diversely esterified polyesterpolyol - used for passive oil loss control resulting in edible food prods. which are less waxy tasting, useful as replacements for tri glyceride fats or oils in food.  
 DERWENT CLASS: A97 D13 E19  
 INVENTOR(S): CORRIGAN, P J; HOWIE, J K; LIN, P Y T; KEENEY, H J  
 PATENT ASSIGNEE(S): (PROC) PROCTER & GAMBLE CO; (CORR-I) CORRIGAN P J; (HOWI-I) HOWIE J K; (LINP-I) LIN P Y T  
 COUNTRY COUNT: 27  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9409639	A1	940511	(9420)*	EN	39
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU CA FI JP KR NO NZ					
AU 9454100	A	940524	(9434)		
FI 9502046	A	950428	(9529)		
NO 9501603	A	950630	(9538)		
US 5480667	A	960102	(9607)		18
JP 08502656	W	960326	(9644)		41
CN 1090133	A	940803	(9713)		
NZ 257473	A	970324	(9719)		
EP 788314	A1	970813	(9737)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
AU 681867	B	970911	(9745)		
SG 47637	A1	980417	(9826)		

# APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9409639	A1	WO 93-US10111	931021
AU 9454100	A	WO 93-US10111	931021
		AU 94-54100	931021
FI 9502046	A	WO 93-US10111	931021
		FI 95-2046	950428
NO 9501603	A	WO 93-US10111	931021
		NO 95-1603	950427
US 5480667	A Cont of	US 92-968780	921030
		US 94-321381	941011
JP 08502656	W	WO 93-US10111	931021
		JP 94-511180	931021
CN 1090133	A	CN 93-119796	931030
NZ 257473	A	NZ 93-257473	931021
		WO 93-US10111	931021
EP 788314	A1	EP 93-924398	931021
		WO 93-US10111	931021
AU 681867	B	AU 94-54100	931021
SG 47637	A1	SG 96-3297	931021

# FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9454100	A Based on	WO 9409639

JP 08502656	W	Based on	WO 9409639
NZ 257473	A	Based on	WO 9409639
EP 788314	A1	Based on	WO 9409639
AU 681867	B	Previous Publ.	AU 9454100
		Based on	WO 9409639

PRIORITY APPLN. INFO: US 92-968780 921030; US 94-321381 941011  
 AB WO 9409639 A UPAB: 940705

The compsn. has a solid fat content profile slope between 21.1-37 deg.C of 0 to 1.26% solids per deg.C. It comprises: (a) a liq. nondigestible oil having a m.pt. below 37 deg.C; and (b) nondigestible solid particles of polyol polyester material dispersed in (a) in an amt. to control passive oil loss when ingested. The ester gps. forming the polyol polyester material consist of (i) at least 15%, ester gps. formed from 20-26C satd. fatty acid gps., and (ii) other ester gps. formed from fatty or other organic acid radicals which are different to the long chain satd. fatty acid radicals.

The molar ratio of the dissimilar radicals to the long chain satd. fatty acid gps. is 0.1:7.9-3:5, provided that the dissimilar radicals do not comprise solely of 2-12C short chain fatty acid gps., 12C or higher long chain unsatd. fatty acid gps., or a combination of short chain satd. and long chain unsatd. fatty acid gps.

USE/ADVANTAGE - Used as a replacement for triglyceride fats or oils in food. Also used as thickening agents. The nondigestible fat compsns. have advantages over known intermediate melting polyol polyesters. As the relatively small nondigestible particles provide efficient passive oil loss control, the level of solids can be reduced to less than 15% of the nondigestible fat, resulting in less waxy tasting prods.

Dwg.0/0

L1 ANSWER 11 OF 11 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 94-166985 [20] WPIDS  
 CROSS REFERENCE: 96-299895 [30]; 96-333206 [33]  
 DOC. NO. CPI: C94-076472  
 TITLE: Non-digestible fat replacement for tri glyceride fats and oils - comprises liq non-digestible oil and non-digestible solid particles of poly ol polyester dispersed in the oil.  
 DERWENT CLASS: A23 A97 D13  
 INVENTOR(S): CORRIGAN, P J; HOWIE, J K  
 PATENT ASSIGNEE(S): (PROC) PROCTER & GAMBLE CO  
 COUNTRY COUNT: 26  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9409637	A1	940511	(9420)*		50
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU CA FI JP KR NO NZ					
AU 9454099	A	940524	(9434)		
CN 1086387	A	940511	(9529)		
FI 9502043	A	950428	(9529)		
EP 666710	A1	950816	(9537)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
NO 9501600	A	950630	(9538)		
JP 08502654	W	960326	(9644)		51
TW 289728	A	961101	(9710)		
NZ 257472	A	970324	(9719)		
EP 666710	B1	970820	(9738)	EN	24
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
DE 69313296	E	970925	(9744)		
AU 682014	B	970918	(9746)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9409637	A1	WO 93-US10108	931021
AU 9454099	A	WO 93-US10108	931021
		AU 94-54099	931021
CN 1086387	A	CN 93-119798	931030
FI 9502043	A	WO 93-US10108	931021
		FI 95-2043	950428
EP 666710	A1	EP 93-924397	931021
		WO 93-US10108	931021
NO 9501600	A	WO 93-US10108	931021
		NO 95-1600	950427
JP 08502654	W	WO 93-US10108	931021
		JP 94-511177	931021
TW 289728	A	TW 93-109782	931120
NZ 257472	A	NZ 93-257472	931021
		WO 93-US10108	931021
EP 666710	B1	EP 93-924397	931021
		WO 93-US10108	931021
DE 69313296	E	DE 93-613296	931021
		EP 93-924397	931021
		WO 93-US10108	931021
AU 682014	B	AU 94-54099	931021
ES 2105342	T3	EP 93-924397	931021

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9454099	A Based on	WO 9409637
EP 666710	A1 Based on	WO 9409637
JP 08502654	W Based on	WO 9409637
NZ 257472	A Based on	WO 9409637
EP 666710	B1 Based on	WO 9409637
DE 69313296	E Based on	EP 666710
	Based on	WO 9409637
AU 682014	B Previous Publ.	AU 9454099
	Based on	WO 9409637
ES 2105342	T3 Based on	EP 666710

PRIORITY APPLN. INFO: US 92-968791 921030

AB WO 9409637 A UPAB: 960829

A non-digestible fat compsn. useful as a replacement for triglyceride fats or oils in foods having a solid fat content (SFC) profile slope at 21.1-37 deg.C of 0-(-1.26)% solids/deg.C comprises: (A) a liq. non-digestible oil of complete m.pt. below 37 deg.C; and (B) non-digestible solid particles of polyol polyester dispersed in the oil in an amt. sufficient to control passive oil loss upon ingestion of the compsn.

The solid particles have a complete m.pt. above 37 deg.C and the polyester material comprises 1-100 (esp. 10-100, more esp. 50-100)% of a polyol polyester polymer and 0-99 (esp. 0-50)% of a polyol polyester monomer component. At least 15 (esp. 45, more esp. 75, most esp. 90)% of the hydroxyl gps. of the polyester material are esterified with 20C (esp. 22C) long chain satd. fatty acid radicals.

The non-digestible fat compsn. comprises 60-99 (esp. 80-99)% liquid non-digestible oil and 1-40 (esp. 1-20)% solid polyol polyester. The polyol polyester polymer component comprises 2-12 (esp. 2-4) monomeric units. The polyol moiety is derived from a sugar or sugar alcohol having 6-8 (esp. 8)-OH gps. The solid

particles have a thickness of less than 1 (esp. 0.1) micron. The particles comprise 40-60% of a polyol polyester monomer component. The solid particles are esp. derived from sucrose and at least 75% of the -OH gps. of the polyester are esterified with long chain satd. fatty acid radicals. The polyester polymer component has a number average mol.wt. of 4,000-36,000 (esp. 5000-12,000). The liquid non-digestible oil is a liquid sucrose fatty acid.

USE/ADVANTAGE - Edible fat-contg. prods. contg. the non-digestible fats are less waxy tasting due to lower levels of solids required for passive oil loss control. The edible substrate is esp. a potato chip and contains 10-100% of the non-digestible fat compsn. The blends of liquid polyol polyesters and solid polyol polyester exhibit little or no phase sepn. of the hardstock particles and it is possible to reduce the level of solid polyol polyester hardstock required for control of passive oil loss. The solid polyol polyesters can also be used as thickening agents in margarines, mayonnaise, dairy desserts (frozen) etc.

Dwg. 0/2